ULSS 001600-15

USER'S LOGISTIC SUPPORT SUMMARY

TACTICAL COMMAND SYSTEM (TCS) AN/TYY-2

NSN 7022-01-477-7627

MARINE CORPS SYSTEMS COMMAND
QUANTICO, VA 22134-5010

SEPTEMBER 2003
PCN 132 107260 00
REVISION 1

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Revision 1

DEPARTMENT OF THE NAVY
Headquarters, U.S. Marine Corps
Washington, DC 20380-0001

31 September 2003

1. This User's Logistics Support Summary (ULSS), authenticated for Marine Corps use and effective upon receipt, advises the Fleet Marine Force and other selected commands of the plan to field and logistically support the Tactical Command System (TCS) AN/TYY-2 (NSN: 7022-01-477-7627).

2. Submit notice of discrepancies or suggested changes to this ULSS to: Commander, MARCORSYSCOM, Attn: Program Manager (Operation Centers, BMADS), 2200 Lester Street, Quantico, Virginia 22134-6050.

3. This ULSS supercedes ULSS dated August 2001.

4. This ULSS is applicable to the Marine Corps Reserve.

BY DIRECTION OF THE COMMANDER MARINE CORPS SYSTEMS COMMAND

OFFICIAL:

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DISTRIBUTION: PCN 132 107260 00

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USER'S LOGISTICS SUPPORT SUMMARY FOR THE TACTICAL COMMAND SYSTEM

1. Introduction. The Tactical Command System (TCS), hereafter referred to as the Theater Battle Management Core Systems (TBMCS), is a Chairman, Joint Chiefs of Staff mandated system among all Department of Defense services for the generation, dissemination and execution of the Air Tasking Order (ATO). TBMCS allows the Future Operations Section (FOS) of the Tactical Air Command Center (TACC) to effectively plan, generate, and disseminate the ATO, and allow the Current Operation Section (COS) of the TACC to monitor and execute the ATO. TBMCS enhances the TACC's ability to manage Marine Corps tactical air operations and coordinate with components of other services.

a. Source of Requirement. The statement of requirement for ATO interoperability is described in the TACC Operational Requirements Document (ORD), CCC 256.1, dated 24 March 1994.

b. Points of Contact

Title	Command	Telephone
Program Manager	COMMANDING GENERAL 2200 LESTER STREET MARCORSYSCOM (PMOC) QUANTICO, VA 22134-6050	(703) 432-4327 DSN 378-4327 FAX (703) 432-2547
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TBMCS Project Officer	COMMANDING GENERAL 2200 LESTER STREET MARCORSYSCOM (PMOC) QUANTICO, VA 22134-6050	(703) 432-4089 DSN 378-4089 FAX (703) 432-2547
Integrated Logistics Support Officer	COMMANDING GENERAL 2200 LESTER STREET MARCORSYSCOM (PMOC) QUANTICO, VA 22134-6050	(703) 432-4092 DSN 378-4092 FAX (703) 432-2547
Logistics Management Specialist	COMMANDING GENERAL MCLB Albany GA 814 RADFORD BLVD SUITE 20343 MCSC Albany (PMOC) ABLANY, GA 31704-0343	(229) 639-5036 DSN 567-5036 FAX (229) 639-6545

TBMCS Project Officer	COMMANDING GENERAL MCTSSA (ADSD) CAMP PENDLETON, CA 92055	(760) 725-2575 DSN 365-2575 FAX (760) 725-9512
MAGTF C4I/HELP Hotline	MCTSSA (ADSD) CAMP PENDLETON, CA 92055	(760) 725-0533/0535 1-800-808-7634 DSN 365-0533/0535

c. System Description. The TBMCS host hardware suite consists of 27 Sun Ultra 60's with one Gigabyte (Gbyte) memory, floppy disk drive, Compact Disk-Read Only Memory (CD-ROM), Product Configuration Identification (PCI) card, flat panel monitor, 12 Raid Chassis, 15 two bay Chassis, five tape drives and 63, 18 Gbyte hard drives. The remote hardware suite consists of a Sun Ultra 60 with one Gbyte floppy disk drive, CD-ROM drive, PCI card with one Gbyte memory, flat panel monitor, two drive bay case and cable with an 18 Gbyte hard drive. TBMCS is a United States Air Force (USAF) developed system architecture, designed to provide the organization, personnel, and equipment required to manage tactical air operations, to execute area air defense and airspace management in the tactical area of operation, and to coordinate operations with components of other military services. Specifically, TBMCS software provides an automated capability to receive, parse, display, store, and forward information required to generate and manage ATOs. TBMCS contains computer workstations, servers, and peripherals configured into a complete system that is capable of scaling down to a single remote workstation for receiving, parsing, and printing the ATO received from the Joint Force Air Component Commander (JFACC).

d. Operational Characteristics. TBMCS contains a variety of Commercial Off-the-Shelf (COTS) workstations and servers that use the UNIX operating system. The system is scaleable and can be configured to support various mission needs.

(1) Command and Control Operations. The host suite includes seven separate servers (six UNIX and one NT) and 21 client workstations that together provide the Air Combat Element (ACE) Commander and his staff automated assistance in the following areas:

(a) Maintaining information on the tactical air situation and portions of the surface combat situation essential to the air effort.

(b) Assisting planners in allocation decisions, in the development of the ATO, and in the dissemination of that ATO to appropriate organizations and facilities.

(c) Assisting in the management of air assets to include assignment and use of assets by subordinate air control or air defense agencies.

(d) Receiving, processing, maintaining, updating, and disseminating information on tactical aircraft and Marine Air-Ground Task Force (MAGTF) agencies.

(e) Receiving, processing, maintaining, updating and correlating intelligence information with other operational databases.

(f) Assisting in other planning functions

1 ATO generation

2 Electronic Warfare Planning

3 Site selection planning map survey

4 Aircrew briefs; storing of joint tactical air requests, assault support requests, and bomb damage assessments

5 Air defense planning; combat air patrol locations, surface-to-air missile unit locations, and tanker track operational engagement areas

6 Aviation logistics planning

7 Targeting and ordnance planning

(2) Operational Compatibility. TBMCS provides the interface necessary to be compatible with standard network protocol and communications equipment organic to the Marine Wing Communications Squadron (MWCS). TBMCS provides increased levels of inter-service compatibility and interoperability.

(3) Degraded Operations. TBMCS capability to continue system operations in a degraded mode is based on the redundancy level inherent in the host suite and the Redundant Array of Independent Disks (RAID) capability provided for servers. This redundancy allows for reconfiguring the system should a particular workstation or server malfunction.

e. Replaced Weapon Systems and Equipment. TBMCS replaced CTAPS, NSN: 5895-01-442-6930, TAMCN: A0012VIIG.

2. Administrative Information

a. Nomenclature. Theater Battle Management Core Systems (TBMCS)

b. Table of Authorized Material Control Number (TAMCN). A00137GP

c. Stores Account Code (SAC). 3

d. National Stock Number. 7022-01-477-7627

e. Item Designator. 10726A

f. Unit of Issue. Each

g. Unit Cost. $1,475,935.99 (Note: The unit cost is based on the unit price of each item listed in table 1 multiplied by the baseline quantities.)

h. Support Cost. $151,811.00

i. Physical Characteristics.

(1) Physical Configuration. Each TBMCS is comprised of a specified quantity of workstations and peripheral equipment separated into a host suite and a remote suite. TBMCS configuration is shown in Figure 1.

(a) Host Suite. The host suite includes seven servers (six UNIX and one NT) and 21 client workstations that provide the ACE staff the capability to generate, disseminate and execute the ATO. The host suite also includes a number of peripherals such as laser printers, tape drives, external hard drives, and other associated equipment. Table 1 provides a complete list of host suite equipment.

(b) Remote Suite. The remote suite is comprised of a workstation and a printer. The remote suite allows the units that are detached from the host suite the capability to receive, parse, print, and dynamically execute the ATO. Remote suite equipment is listed in Table 2. The difference in quantities among the Marine Aircraft Wings (MAWs) is due to geographical dispersion and differences in number of squadrons and groups to be supported. Commander, Marine Forces Pacific (MARFORPAC) will receive three TBMCS workstations separately from the four MAWs. Table 3 reflects remote suite workstation distribution.

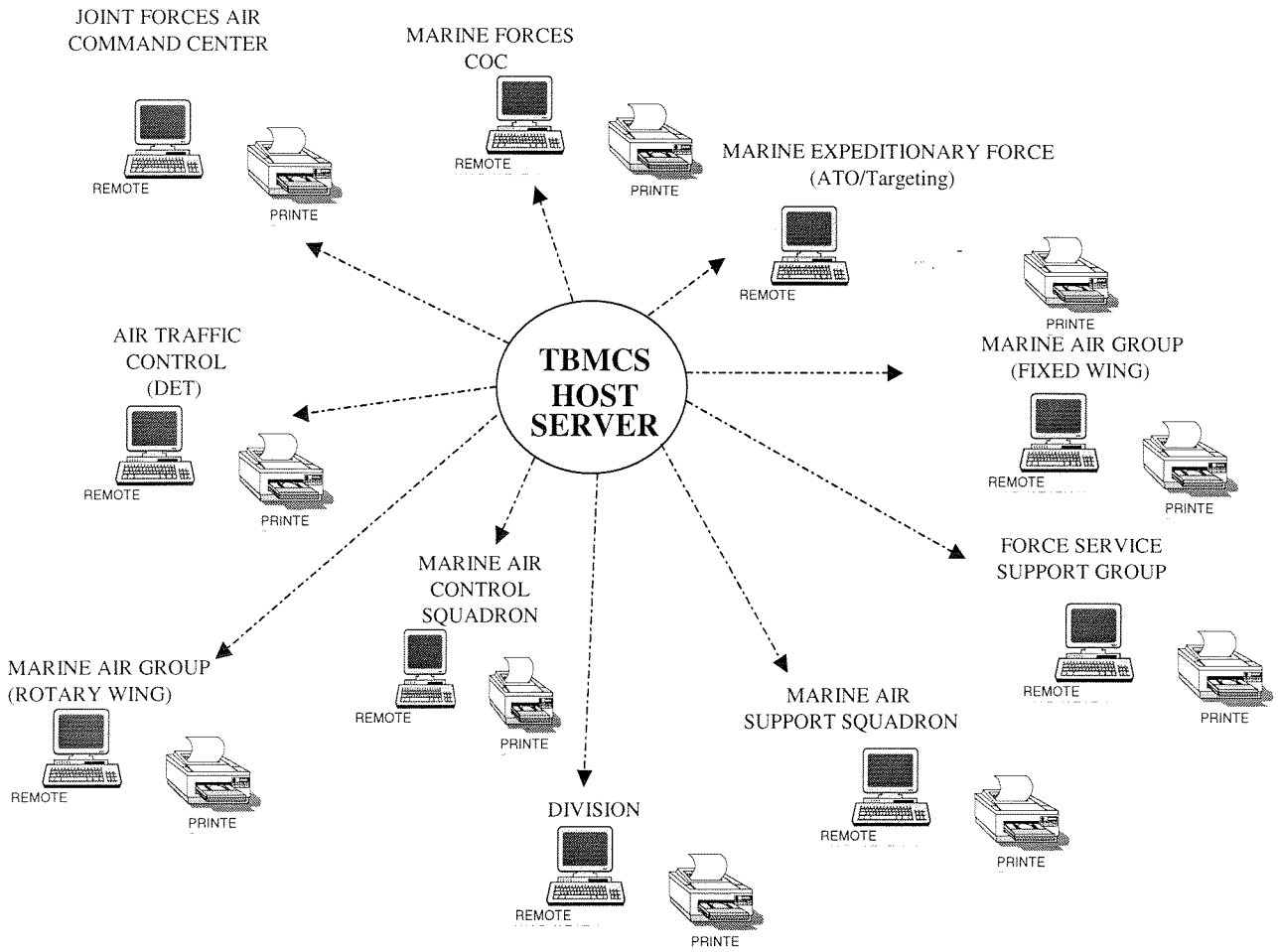

Figure 1 Host and Remote Suite Configuration

Table 1. TBMCS Equipment List – Host Suite

ITEM	MANUFACTURER	NSN/PART NUMBER	1ST MAW	2ND MAW	3RD MAW	4TH MAW	MCTSSA	MCCES	MAWTS-1	MSTP
ULTRA 60 with 1 Gbyte RAM, Floppy Drive, CD ROM, and PCI Card	Sun Microsystems	A23-UDL2-9L-512AQ	27	27	27	27	0	27		8
18" TFT LCD Flat Panel Monitor	Sun Microsystems	X7127A	27	27	27	27	0	27		8
Country Kit for US Type 6	Sun Microsystems	X3515A	27	27	27	27	20	27	10	8
Smartstore 7X RAID Desktop Chassis with removable 110V power supply and cable	Z -Micro Systems	B0731-DSY	12	12	12	12	6	6	6	6
Two Drive Bay Chassis	Z- Micro Systems	S3-ZM-B0200SY	15	15	15	15	14	21	4	2
12GB 4mm DDS-3 in a Unipack desktop enclosure (external 4mm tape drive)	Sun Microsystems	SG-XTAP4mm-011A	5	5	5	5	3	5	3	3
Z-Micro Systems Smart Pak 18.2 GB, 7200 RPM	Z-Micro Systems	SP1-MD18S-KS	63	63	63	63	46	45	28	28
Ultra II w/ 1 Gbyte RAM, CD ROM, and Floppy Drive	Sun Microsystems	Ultra II					20		10	
CISCO SWITCH, 2924	CISCO	WS-C2924M-XL-EN	2	2	2	2	0	0	0	
Laser Printer w/o Optional Ethernet CCA	Hewlett Packard	C4253A#ABA	5	5	5	5	1	1	1	
Hardigg Cases for UPS's	Hardigg	16099-1000	27	27	27	27	20	NA	NA	NA
Hardigg Case for Workstation Kit: CPU, Monitor, Keyboard, Drive Bay, Cables and Accessories	Hardigg	16099-100	27	27	27	27	NA	NA	NA	NA
Hardigg Case for External Tape Drives	Hardigg	16099-300	1	1	1	1	NA	NA	NA	NA
Hardigg Case for Hard drives	Hardigg	16099-400	4	5	5	5	NA	NA	NA	NA
Hardigg Case for RAID Bays	Hardigg	16099-200	4	4	4	4	NA	NA	NA	NA
Hardigg Case for Laser Jet 4M Printer	Engineered Packaging		5	5	5	5	NA	NA	NA	NA
Uninterruptible Power Supply's	American Power Corporation	SU1400NET	27	27	27	27	20	27	NA	8

Table 2. TBMCS Equipment List – Remote Suite

ITEM	MANUFACTURER	NSN/PART NUMBER	QTY REQ.
Ultra 60 with 1 Gbyte RAM, Floppy Drive, CD ROM and PCI Card	Sun Micro Systems	A23-UDL2-9L-512AQ	1
18" TFT LCD Flat Panel Monitor	Sun Micro Systems	X7127A	1
Z Micro Systems 2 Drive Bay Case with 3 foot cable	Z Micro Systems	S3-ZM-B0200SY	1
Z Micro Systems Smart pack 18.2\GB 7200RPM	Z Micro Systems	SP1-MD18S-KS	2
Laser Printer	Hewlett Packard	C4253A#ABA	1
Uninterruptible Power Supply	American Power Corporation	SU1400NET	1
Hardigg Case for Remote Workstation Kit: CPU, Monitor, Keyboard, Drive Bay, Cables and Accessories	Hardigg	16099-100	1
Hardigg Case for UPS	Hardigg	16099-1000	1
Hardigg Case for Printer	Hardigg		1

j. Petroleum, Oil, and Lubricants (POL). N/A

k. Equipment Density. Normal Density

l. Resource Reporting. Yes

m. Power Requirements. The AC electrical service is supplied by the power distribution systems organic to the Modular Extendable Rigid Wall Shelter (MERWS) complex. The MERWS complex receives power primarily from Mobile Electronic Power (MEP) generators organic to the Marine Tactical Air Command Squadron (MTACS). The Shelter Suite operates from a 120/208 volt AC, 60 Hz, 3-phase power source. Each workstation is connected to it's own uninterruptible power supply (UPS).

Table 3. Operational Employment of TBMCS Remote Suite Workstations

UNIT	1ST MAW	2ND MAW	3RD MAW	4TH MAW
MARINE AIR GROUP (FIXED WING)	1	2	2	2
MARINE AIR GROUP (ROTARY WING)	1	2	2	2
MARINE AIR CONTROL SQUADRON	1	2	2	2
MARINE AIR SUPPORT SQUADRON	1	1	1	1
JOINT FORCES AIR COMMAND CENTER	1	1	1	1
AIR TRAFFIC CONTROL (DET)	2	4	4	4
MARINE EXPEDITIONARY FORCE	5	6	6	-
DIVISION	2	2	2	2
FORCE SERVICE SUPPORT GROUP	2	2	2	2
SUBTOTAL:	16	22	22	16

n. Associated Weapons Systems and Equipment. Shelter Suite (S-786/G), consisting of Tactical Expandable Two-Sided, Complexing Kit Passageway, and MERWS.

3. Fielding Methodology.

a. General Fielding Plan. TBMCS was fielded vertically to each active and reserve unit according to the schedule in appendix A.

b. Method of Fielding. TBMCS was force fed directly from the vendor to the gaining commands beginning 1st QTR FY01. USAF Fielding Teams fielded Marine Corps Communication-Electronic School (MCCES), and the four MAWs. Marine Corps Tactical Systems Support Activity (MCTSSA) personnel fielded to Marine Aviation Weapons and Tactics Squadron 1 (MAWTS-1), MAGTF Staff Training Program (MSTP), MCTSSA and MARFORPAC.

c. Fielding Responsibilities. Units were responsible for conducting a limited technical inventory of technology refresh equipment received, and removing the internal hard drive from each Sun Ultra 60 prior to the arrival of the AF fielding team.

(1) Gaining Commands

(a) Gaining Commands should have established a single point of contact (POC) with the authority to resolve any problems that were encountered during the fielding process. The POC should have been on hand and authorized to sign and report receipt for the unit.

(b) Gaining Commands provided personnel, facilities, material handling equipment, and administrative support to the Material Fielding Team (MFT) during the equipment hand-off and training.

1 Gaining Commands provided a secure space large enough to unpack, inventory, inspect, perform operational checks, and store items.

2 Gaining Commands provided a classroom for training.

(c) Gaining Commands established and maintained security safeguards in accordance with DoD Directive 5200.28, Security Requirements for Automated Information Systems, dated 21 March 1988. Refer to Appendix "X" of TBMCS Security Policy, Version 1.0.1, dated 12 May 2000.

(2) Marine Corps Systems Command (MARCORSYSCOM)

(a) MARCORSYSCOM provided the MFT to conduct training and provide guidance required for introducing the AN/TYY-2 to the Marine Forces (MARFOR).

(b) MARCORSYSCOM coordinated with the gaining commands regarding the time, facilities, and personnel required for completing the fielding effort.

(3) Commanding General, Marine Corps Logistics Command (CG, MCLC), Albany

(a) Will assign participant(s) to the MFT and provide information regarding security clearances to MARCORSYSCOM 45 days prior to fielding events.

(b) If needed, will address the requirement to provide temporary storage of items being fielded.

4. Logistics Support.

a. Maintenance Support. The TBMCS utilizes COTS hardware that will rely, to a great extent, on commercial support practices for maintenance, modification, revision of hardware, and supply support. Providing effective and efficient maintenance of Command, Control, Communications, Computer, & Intelligence (C4I) systems is the responsibility of the Marine Corps Logistics Support Manager (LSM). This support is provided through Single Service Logistics Support Manager (SSLSM) contracts. The LSM, CG, MCLC, Albany, has appointed a Senior Government Service Representative/Funding Manager (GSR/FM) to manage contractor maintenance under SSLSM contracts. The Senior GSR/FM has determined that contract support for TBMCS equipment will be accomplished under the Intelligence, Information, Processing and Production (I2P2) contract, under the SSLSM, for the life cycle of the TBMCS. To facilitate this support, the Marine Expeditionary Force (MEF) assigns local GSRs to manage the operation and maintenance of the systems which I2P2 supports. Contractor field services representatives located at each of the MEFs, working under the I2P2 contract, are known as Field Service Technicians (FSTs) and Field Service Assistants (FSAs). The FSTs perform maintenance services, and the FSAs provide logistics support within the MEF geographical area, under the overall direction of the local GSR.

(1) Maintenance Concept. Maintenance support will be provided by the FSTs as well as qualified organic maintainers Military Occupational Specialty (MOS) 5962 and 5974. Maintenance will be accomplished at two levels: organizational (O-level) and depot level (D-level). Because of the emphasis on COTS equipment for TBMCS, the requirement for test and support equipment to

perform maintenance tasks has been minimized. O-level maintainers will employ equipment self-testing and logical troubleshooting techniques to isolate, locate and replace defective components at the lowest Line Replaceable Unit (LRU) level (e.g. printer or keyboard). In garrison, the defective LRU will be returned for warranty repair (if applicable). The LRU will be repaired or replaced (replacement must meet form, fit and function) by the FST. While deployed, defective LRUs will be exchanged for operational items from a government owned spares package.

(a) Organizational Level Maintenance. The using unit is responsible for accomplishing O-level (first and second echelon) maintenance as well as system administration.

1 Operator Responsibilities. TBMCS operators are responsible for maintaining a clean, complete, and fully operational system. Procedures for accomplishing this are described in commercial documentation accompanying the equipment. In the event of a hardware malfunction, operator troubleshooting consists of ensuring the TBMCS components are properly connected, power cables are plugged into the correct operable power source outlets, and power switches on components are set to the "ON" position. If the malfunction persists, the condition should be reported to the unit's organic O-level maintenance personnel. Operator's responsibilities include the following:

- Inspect computer and other components prior to installation.
- Monitor results of equipment power-on self-tests.
- Verify proper operation of the system.
- Clean chassis exterior, including connectors.
- Clean keyboard assembly.
- Check screws and fasteners for tightness.
- Clean screen surfaces.
- Clean exterior of peripherals, connectors and cables.
- Inspect accessories.
- Reboot the computer.

2 O-level Maintainer Responsibilities. Unit level organic maintainers (MOS 5962 and MOS 5974) will perform a preliminary evaluation of TBMCS hardware malfunctions reported by operator or system administration personnel. Component or system software diagnostics will be executed to isolate to the LRU. If a problem persists, the GSR will be contacted, who will then contact an FST to provide further troubleshooting assistance. Defective LRUs will be removed and replaced with a functioning component either by the FST or by organic maintainers at the direction of the FST. O-level maintenance tasks include:

- Verify serviceability of cables.
- Fault isolate to defective LRU.
- Removal and replacement of defective items.
- Configure workstations per customer requests.
- Evacuate defective items to higher echelon.
- Perform quality control procedures on items returned from higher echelon.

Note: Authority to open TBMCS component cases to perform repair actions is subject to the provisions of the appropriate equipment warranty, as well as the availability of an Electrostatic Discharge (ESD) safe workstation. Failure to properly use ESD safe procedures may result in immediate or delayed catastrophic failures or degraded performance detectable only during special or peak equipment operations.

(b) D-Level Maintenance. The TBMCS equipment manufactures or vendors will perform depot level maintenance on items under their cognizance that fail and are beyond repair at the organizational level. While the TBMCS equipment items are still under warranty, repair actions will be accomplished under the provisions of the applicable warranty. Equipment items that fail due to circumstances not covered by applicable warranty, or which are beyond the warranty period, must be repaired or replaced, as required, at the expense of the government.

(2) Designated Support Depot. MARCORSYSCOM Albany (Code 575-1) will oversee contractor repair services at both the Intermediate and Depot Levels, by managing and monitoring the Contractor Logistics Support (CLS) contract.

(3) Calibration Requirements. None required.

b. Contractor Support Requirements

(1) FST. The FST is the contractor's employee assigned to a central site and is available to perform maintenance services and provide logistics support for the TBMCS. The arrangement for support from the FST may be "on-site", meaning the site is the regular place of work for the FST; or per-call, meaning the FST visits the site on an as-needed basis when called to do so. Below is a list of the responsibilities of the FST (this is not all inclusive):

- Deploys with a system (24 hours notification within Continental United States (CONUS); 48 hours Outside CONUS (OCONUS)).
- Provides on-site remote maintenance for problems with hardware immediately during the Principal Period of Maintenance (PPM) and within two hours, if required, outside the PPM.
- Provides per-call remote maintenance in accordance with the terms of the delivery order.
- Conducts preventive maintenance on a schedule determined by the original equipment manufacturer's suggested frequency, and site's operational requirements.
- Installs, removes, (un-installs) or relocates equipment.
- Complies with all security requirements.
- Contacts the Regional Manager for backup support as required.
- The FST will possess a security clearance at the highest level of classification required by the site being supported.

(2) FSA. The FSA is the contractor's employee assigned to a central site and primarily provides logistics and administrative support to the FST. Below is a list of the responsibilities of the FSA (this list is not all inclusive):

- Assists the GSR with Warranty Coordination.
- Maintains and updates the site hardware inventory database to include updating the database each time an approved modification, change or revision is incorporated into the system or component.
- Manages government owed spares held by the contractor.
- Ensures that site equipment has bar code labels attached.
- Organizes, files and maintains all government and contractor documentation for the GSR.
- Prepares and submits all contractor generated documentation to the Senior GSR/FM on a monthly basis.

(3) Interim Contractor Support (ICS). The Air Force will provide limited ICS for major exercises identified by MARCORSYSCOM. Exercise support will be in the form of Air Force "Blue Suit" or civilian contractors, and will be for the purposes of assisting Marines (system administrators and operators) with gaining experience in the operation and maintenance of TBMCS.

(4) CLS. Contract support is used for the life cycle of TBMCS. The contractor's FST will perform all levels of maintenance required as stated in the Contractor Support Requirements in paragraph 4b above.

c. Manpower, Personnel, and Training.

(1) Personnel Requirements. The AN/TYQ-1(V), TACC Military Manpower/Hardware Integration Program (HARDMAN) analysis of July 1995, concluded that fielding of the TACC did not create additional personnel requirements to the tables of organization 8620/8620A (MTACS), 7442 (MCTSSA), or 7720 (MCCES). However, due to complexity of equipment integration and operating environment, a systems administrator position was required. Accordingly, maintainers (MOS 5974) assigned to the TACC will fulfill the system administration functions. The current support structure for the TACC system contains sufficient personnel to set up, tear down, and maintain the equipment.

(2) Training Requirements. The introduction of TBMCS requires training of all personnel for its operation and maintenance, including current TACC operations and maintenance personnel. TBMCS related MOS's are identified in Table 4. TBMCS application peculiar training is conducted in two principal academic environments; the joint courses given at the C2 Warrior School (C2WS), Hurlburt Field, FL and the Marine Corps course conducted at MCCES, Twenty-nine Palms, CA.

Table 4. MOS's Related to TBMCS Training

MOS	TITLE	SKILL DESIGNATOR
7204	Surface-to-Air Weapons Officer	Surface-to-Air Weapons Officer
7208	Air Support Control Officer	Air Support Control Officer
7210	Air Defense Control Officer	Air Defense Control Officer
7220	Air Traffic Control Officer	Air Traffic Control Officer
7234	Air Command and Control Electronics Operator	Air Command and Control Electronics Operator
7236	Tactical Air Defense Controller	Tactical Air Defense Controller
7242	Air Support Operations Operator	Air Support Operations Operator
5962	Tactical Data System Repairer	Tactical Data Systems Equipment Repairer
5974	Tactical Data System Technician	Tactical Data Systems Administrator
75XX	Air Crew	Pilot or Naval Flight Officer

(a) TBMCS Training. MOS 5962 assumes responsibility for the maintenance of TBMCS and limited system administration functions. MOS 5974 assumes responsibility for overall system administration. TBMCS training is currently conducted at the C2WS, Hurlburt Field, FL. Quotas for TBMCS at the C2WS are allocated to all services. The duration of the course is five weeks and conducted six times each year. MCCES has incorporated the curriculum from the C2WS System Administration course into instruction for MOSs 5962 and 5974. MCCES conducts the formal courses twice a year. MCCES has also incorporated curriculum from the C2WS computer applications course into instruction for MOSs 7202, 7208, 7210, 7234, 7236 and 7242 for instruction in TBMCS remote operations.

1 Instruction for MOS 5962 covers Marine Corps Common Hardware Suite maintenance philosophy, corrective maintenance to the LRU, and basic UNIX networking and operating systems. Periods of instruction do not exceed 210 hours.

2 Instruction for MOS 5974 covers advanced networking and UNIX concepts, manipulation of databases, and TBMCS system administration and operations. Periods of instruction do not exceed 218 hours.

3 Instruction for MOSs 7208, 7210, 7234, 7236, 7202, and 7242 focuses on TBMCS remote operations. This course is still under development and will not exceed 40 hours.

(3) Training Support Items. MCCES will receive a full TBMCS host system. The system is dedicated to maintainer training and familiarization training for the Air Support and Air Defense Officers courses. No special support is required for the MCCES system.

d. Supply Support. Commanding General, Marine Corps Logistics Command (CG, MCLC), Albany, will provide supply support for the TBMCS system using the SSLSM I2P2 contract. Due to TBMCS versatility, scalable to support varying mission scenarios, the makeup of each package may vary in content and quantity of items. CG, MCLC, Albany, in conjunction with the contractor, will determine the range and depth of spares. Individual unit spares will not be procured. Parts will be repaired/replaced via the three-year warranty, and administered by the FSA.

e. Support Equipment.

(1) Special Tools. None Required.

(2) Common Tools. Common tools necessary to support TBMCS are a set of screwdrivers included in the Tool Kit, Electronic Maintenance, M-2569/P, TAMCN: A79002E, NSN: 5180-01-244-1290, which is organic to each using unit's T/E.

(3) Special Purpose Special Purpose Test Equipment. None Required.

(4) General Purpose Test Equipment. Table 5 list the General Purpose Test Equipment.

Table 5. General Purpose test Equipment

NOMENCLATURE	NSN	TAMCN
Multimeter, Digital, Handheld, Fluke Model 77/BN	6625-01-336-3372	H7073
Computer Test Kit, TS-4516/U	7025-01-443-3383	H7924

(5) Application Program Sets and Test Program Sets. None Required.

(6) Other Support Equipment. None Required.

f. Technical Publications. There are no separate technical publications used with TBMCS. All Software Users Manuals (SUMs) are built into the software and are accessed through the HELP Menu. The Load SUM is delivered in hardcopy form.

g. Computer Resources Support. The USAF provides TBMCS Post Deployment Software Support (PDSS). MCTSSA (AC09) provides oversight and management of PDSS and has primary responsibility and authority for Marine Corps TBMCS software configuration issues. Field units report software related problems to MCTSSA. After appropriate validation MCTSSA reports software problems to MARCORSYSCOM for correction in future releases of TBMCS software. TBMCS software corrections are controlled and accomplished through the TBMSC Requirements Planning Team.

h. Facilities. No new facilities will be required to accommodate or support TBMCS.

(1) Existing Facilities. TBMCS will utilize the TACC facilities.

(2) New Facilities. N/A

(3) Interim Facilities. N/A

i. Packaging, Handling, Storage, and Transportation

(1) Packaging

(a) From the Manufacture. The TBMCS is preserved and packaged within high impact, plastic transit cases. These cases are normally transported within the S-786/G shelters of the TACC. Equipment scheduled for shipment to using units for immediate use shall be preserved and packaged in accordance with the best commercial practices of ASTM D 3951-98. Items scheduled for shipment to overseas destinations will be in accordance with ASTM D 3951-89, paragraph 6.1, Export Shipments. Items scheduled for long term storage shall be preserved and packaged in accordance with the Level A requirements of Military Standard (MIL-STD)-207-1D, Department of Defense (DoD) Standard Practice for Military Packaging, Appendix A, Table A. VI, Electronic Equipment. Transit containers, shall be maintained by the using units for use in storage, to prevent equipment failure or return to stock. Marking for shipment shall be in accordance with MIL-STD-129, DoD Standard Practice for Military Marking.

(b) From the Using Unit. In the event of a required return to stock, the using unit shall be responsible for the preservation and packaging of the item within the transit cases in accordance with current Level A policy and procedures (i.e. MILSTD-2073-1D, DoD Standard Practice for Military Packaging and Marine Corps Order (MCO) 4030.36, Marine Corps Packing Manual). A return for repair will be to Level B requirements. Should a repair/spare part, that is determined to be electrostatic sensitive, be required for repair or return to stock, it shall be preserved and packaged in accordance with the Level A requirement of MIL-STD-2073-1D, Appendix J, Table J.Ia, Specialized preservation code "GX". All items subject to electrostatic discharge shall be packed into a reusable fast-pack container. Marking for shipment shall be in accordance with MIL-STD-129, DoD Standard Practice for Military Marking.

(2) Handling. The TMBCS is not ruggedized and must be handled accordingly. All components are stored within the transit cases and are one or two person transportable. Should the TBMCS contain classified information it shall be handled in accordance with the appropriate policy and procedures of the Communications Security Material System Policy and Procedures Manual (CMS-1A).

(3) Storage. For long-term storage or shipment overseas, other than air, TBMCS shall be preserved and packaged in accordance with MIL-STD-2073-1D, Appendix A, Table A. VI, Electronic Equipment. The TBMCS shall be in operational condition prior to storage. Marking for shipment shall be in accordance with MIL-STD-129. The TBMCS shall be stored in a covered structure, providing protection from the elements and meeting special humidity criteria (-40 C (-40 F) to +71 C (± 160F)). If the item for storage contains information deemed as classified, then the requirements of the Communications Security Material System Policy and Procedures Manual (CMS-1A) policy and procedures shall be invoked. Batteries shall be removed prior to storage. At the using unit, storage will normally be within the S-786/G shelter.

(4) Transportation. The TBMCS and its components, because of their modular configuration, are transportable by all means available to the Marine Corps (i.e. air, ground (truck), and water) exercising all safeguards for Automatic Data Processing equipment. The DoD 4500.9R, Defense Transportation Regulation, Part II, Cargo Movement shall govern movement of the material. The transportation of classified information or equipment will be in accordance with the procedures

contained in OPNAVINST 5510 series and the Communications Security Material System Policy and Procedures Manual (CMS-1A).

j. Transportability and Naval Integration. None Required.

k. Warranties. The contractor is responsible for recording, reporting, and replenishing all spare and repair parts that are under warranty and are consumed in the performance of system maintenance. Replenishment of items under warranty is on a non-reimbursable basis. As part of Technical Refresh of hardware, there is a three-year warranty, which covers parts of all hardware. The CLS contractor will administer this warranty.

l. Environmental, Safety, And Health. None Required.

m. Waivers and Plan of Action and Milestones. There are no waivers or plans of action on any integrated logistics support element or related function for fielding.

5. Actions Required to Place Equipment in Service.

a. Gaining Commands.

(1) Fielding Requirements. Using units performed an acceptance inspection upon receipt of their respective TBMCS assets and notified COMMARCORSYSCOM and CG, MCLC as TBMCS was placed in service.

(2) Material Defects Reporting. Submit all fit, form, or function deficiencies in accordance with standard Product Quality Deficiency Reporting (PQDR) procedures contained in TM 4700-15/1_ and MCO 4855.10_ to Operations and Business Center, ATTN: PDQR Section (L150), 814 Radford Blvd., STE 20330,Albany, GA 31704-033. Disposition for the failed item will be furnished to the user based on the PQDR. PQDR's may be submitted via the Product Data Reporting and Evaluation Program (PDREP) at <http://www.nslcptsmh.navsea.navy.mil/pdrep/pdrep.htm>. The PQDR form is also available at website: <http://www.ala.usmc.mil/pqdr/default.asp> and may be forwarded to the PQDR Screening Point via e-mail attachment to <mailto:mbmatcompqdrs@logcom.usmc.mil>. Submit Supply Discrepancy Reports, SF 364, per UM-4400-124 and SECNAVINST 4355.18 (reporting of Item and Packaging Discrepancies) on shortages, overages and packaging and preservation discrepancies. Any damage due to improper packaging will be submitted via SDR procedures. Damage due to shipping discrepancies will be submitted as a Transportation Discrepancy Report, SF361. Damage caused by other than shipping and packaging will be reported on PQDR.

(3) Retrograde of Existing Systems and Equipment. N/A

(4) Obtaining Supporting Consumables. Upon acceptance, the gaining unit assumes budgeting and requisitioning responsibilities for consumables required to support TBMCS.

(5) Controlled Item Reporting. TBMCS is classified as a controlled item. Accordingly, controlled item reporting for this system is being accomplished in accordance with current directives.

(6) Marine Corps Ground Equipment Resource Reporting (MCGERR). This item is MCGERR reportable, and is included in Marine Corps Bulletin (MCBUL) 3000.

(7) Security Requirements. Security requirements are detailed in the TBMCS Security Classification Guide, which was provided during initial fielding.

b. CG, MCLC, Albany. In addition to normal responsibilities and functions relative to fielding a new system, CG, MCLC, Albany accomplished the following tasks:

(1) Establish and implement CLS procedures for TBMCS. The CLS contract shall provide on-call, worldwide logistics support, including depot level repair for COTS equipment.

(2) Monitor the CLS contract, to insure the contractor is in compliance with all requirements of the contract.

c. MARCORSYSCOM.

(1) Directed and provided oversight during loading of equipment listed in table 1, into the unit Table of Equipment (T/E).

(2) Directed and provided oversight during conversion of TBMCS planned allowances to actual allowances on applicable T/E's.

(4) Oversaw USAF MTT's at each unit.

d. Designated Software Support Activity. MCTSSA (AC09) was responsible for the oversight and management of PDSS; had primary responsibility and authority for Marine Corps TBMCS software configuration issues; provided technical software support to its users; and perform as the POC to the Lockheed Martin Mission Systems Tier II HELP DESK. USAF Contractor installation teams installed TBMCS hardware at MCCES. MCTSSA will perform subsequent installations at MARFORPAC, MAWTS-1, MSTP, and MCTSSA itself.

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Appendix A:

List of Allowances and Delivery Schedules

T/E NO:	UNIT TITLE:	ALLOWANCES:	PLANNED FY 01 BY QUARTER			
			1	2	3	4
N8615	MTACS - 38, 3RD MAW	1	1			
7720	MCCES*	1	1			
N8615	MTACS - 28, 2ND MAW	1		1		
N8615	MTACS - 18, 1ST MAW	1			1	
7442	MCTSSA *	1		1		
N8615	MTACS - 48, 4TH MAW	1			1	
	MAWTS-1	1			1	
	MSTP	1			1	
	MARFORPAC**	1		1		

* MCCES and MCTSSA received a scaled-down version for training purposes, PDSS and engineering respectively. Please refer to Table 1 for the exact equipment issued to the respective unit.

** MARFORPAC will receive 3 remote terminals only.

NOTE: The information provided above is accurate as of the date of publication of this ULSS. Subsequent changes to unit allowances or deliveries are reflected through modification of quantities in the EAF.

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Appendix B: Schedule of Events

EVENT:	FY 01 BY QTR 1	2	3	4
Fielding Decision	X			
IOC	X			
FOC				X

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Appendix C: ACRONYMS

ATO	Air Tasking Order
C2WS	Command and Control Warrior School
C4I	Command, Control, Communications, Computers, and Intelligence
CD-ROM	Compact Disk-Read Only Memory
CLS	Contract Logistics Support
CONUS	Continental United States
COTS	Commercial Off-the-Shelf
CTAPS	Contingency Theater Automated Planning System
D-LEVEL	Depot Level Maintenance
DoD	Department of Defense
ESD	Electro Static Discharge
FM	Funding Manager
FSA	Field Services Assistant
FST	Field Services Technician
CD-ROM	Compact Disk-Read Only Memory
Gbyte	Gigabyte (approximately 1,000,000,000 bytes)
GSR	Government Service Representative
HARDMAN	Military Manpower/Hardware Integration Program
I2P2	Intelligence, Information, Processing and Production
ICS	Interim Contractor Support
LSM	Logistics Support Manager
LRU	Line Replaceable Unit
MAGTF	Marine Air-Ground Task Force
MARCORLOGBASE	Marine Corps Logistics Base
MARCORSYSCOM	Marine Corps Systems Command
MARFORPAC	Marine Forces Pacific
MAW	Marine Aircraft Wing
MAWTS-1	Marine Aviation Weapons and Tactics Squadron One
MCCES	Marine Corps Communication-Electronics School
MCGERR	Marine Corps Ground Equipment Resources Reporting
MCLC	Marine Corps Logistics Command
MCO	Marine Corps Order
MCTSSA	Marine Corps Tactical Systems Support Activity
MEF	Marine Expeditionary Force

MERWS	Modular Extendable Rigid Wall Shelter
MFT	Material Fielding Team
MIL-STD	Military Standard
MOS	Military Occupational Specialty
MSTP	MAGTF Staff Training Program
MTACS	Marine Tactical Air Command Squadron
MTTS	Mobile Training Team
O-LEVEL	Organizational Level Maintenance
PDSS	Post Deployment Software Support
PPM	Principal Period of Maintenance
POC	Point of Contact
PSS	Perimeter Security System
RAID	Redundant Array of Independent Disks
SSLSM	Single Service Logistics Support Network
SUM	Software Users Manual
T/E	Table of Equipment
TACC	Tactical Air Command Center
TBMCS	Theater Ballistic Missile Core System
ULSS	User's Logistic Support Summary
USAF	United States Air Force
VPN	Virtual Private Network